UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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ART UNIT	PAPER NUMBER
2135	

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 June 2004</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-33 and 35</u> is/are pending in the application.

     4a) Of the above claim(s) <u>34</u> is/are ~~withdrawn from consideration~~. *Canceled,*

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-33, 35</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-33 and 35 are pending.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Turk et al (US 6, 415, 271)

    a.   *Referring to claim 1:*

        i.   Turk teaches:

            (1)   data storage means **[i.e., referring to Figure 1, one deposit site, that is "data storage means ", having secure facilities for storage of a valuable commodity (column 4, lines 43-44)]**;

            (2)   a user account associated with the user **[i.e., referring to Figure 1, customer(i) 10, that is "a user account", stores gold at a storage site 12 (column 8, line 1)]**; and

            (3)   means for establishing a digital data transaction session in which the user is able to instruct storage or retrieval of a digital data item in association with the user's account **[i.e., referring to Figure 1, customer(i) 10 stores gold at a storage site 12 and requests the storage site to send him digital data representing certain specific values of gold, not to exceed the value of the stored gold (column 8, lines 1-3)]**;

(4)   means for encoding the data item into a plurality of parts, the parts being separately stored in the storage means **[i.e., once Customer(i) receives the digital data, he can transfer all or a portion of the value of the digital data encoded in the smartcard to another Customer(ii) 16, who also has a smartcard, for the payment of goods and/or services (arrow D). Customer(ii) then can send the digital data to the bank for storage in Customer (ii)'s account (column 8, lines 11-16). In addition, Turk further teaches that several kinds of cashless financial transaction systems, not based on gold or other valuable commodities, are also available. These include credit cards and debit cards which customers may use with a wide range of retailers. Each transaction of this type is accompanied by the provision of customer account details, that is for "encoding the data item into a plurality of parts", required for the actual transfer of funds between the specific customers and the specific retailers (column 3, lines 21-32)]**; and

(5)   means for decoding the encoded data item **[i.e., A customer, such as Customer(iii), can redeem the digital data value for gold bullion (arrow H), or if desired into a national or regional currency (such as the Euro) (column 8, lines 22-25)]**, whereby decoding the encoded data item is inherent.

b.   _Referring to claim 2:_

i.   Turk further teaches:

(1)   wherein the data storage means comprises at least one data storage device, the parts being separately stored on the data storage device or devices **[i.e., a "storage site" as used herein is a secure facility (e.g., a vault) in which the valuable commodity (e.g., gold) is held for safekeeping. Preferably there are several storage sites for storing the commodity, that is "the parts being separately stored on the data storage device or devices" (column 5, lines 65-67)]**.

c.   _Referring to claim 3:_

i.   Turk further teaches:

(1)   means for communication with the user **[i.e., referring to Figure 1, Customer(i) 10 stores gold at a storage site 12 and requests**

the storage site to send him digital data representing certain specific values of gold, not to exceed the value of the stored gold (arrow A) (column 8, lines 1-4)].

  d. *Referring to claim 4:*

   i. Turk further teaches:

    (1) means for authentication of the user with the depository [i.e., **electronic cash is downloaded by the client from the bank and is held in the portable electronic device, which in one preferred embodiment, comprises a smart card (sometimes also called an "electronic purse"). The downloading occurs via a computer network that gives access, that is "for authentication of the user with the depository", to the client's account at his bank (column 6, lines 57-62)].**

  e. *Referring to claim 5:*

   i. Turk further teaches:

    (1) means for authentication of the depository by the user [i.e., **the users' security codes, that is "for authentication of the depository by the user", and the amount of cash to be transferred are entered into the keypad of the wallet, and the process of value transfer is triggered (column 7, lines 9-15)].**

  f. *Referring to claims 6, 7, and 8:*

   i. Turk further teaches:

    (1) wherein the user is able to instruct retrieval of a copy of the item in said transaction session; wherein the user is able to instruct deletion of the digital data item in said transaction session; wherein the user is able to instruct an account status report in said transaction session [i.e., **in the Mondex.RTM. system, such transfers are accomplished using an intermediary electronic device known as a "wallet," into which is inserted the smartcards of both the transferring and receiving persons, wherein "the user is able to instruct retrieval of a copy of the item in said transaction session; to instruct deletion of the digital data item in said transaction session; and to instruct an account status report in said transaction session" are considered to include in this Mondex.RTM. system (column 7, line 6)].**

g.   *Referring to claim 9:*

   i.   Turk further teaches:

   (1)   wherein the user's account has a data structure identifying the user and containing information identifying the data items stored therein **[i.e., the "bank" is a organization which creates account relationships with its clients and maintains information received from the storage sites regarding gold (or other commodity) held there for storage and specifically identified for use in the system. The system of the invention requires the system users to establish a fiduciary relationship with the bank. The relationship is confirmed when a system user either (1) stores gold with, or (2) purchases, from another person, gold already held at one or more storage sites (column 6, lines 35-43)]**.

h.   *Referring to claim 10:*

   i.   Turk further teaches:

   (1)   wherein the information of each data item includes at least one of the type, size, time/date of submission, period of storage and pointers to the locations of the stored parts of the data item **[i.e., in the first case, the storage site verifies the receipt (in which time/date of submission is considered to include in this receipt) of the gold and provides confirmation to the system user specifying the pure weight, that is "size", and/or other physical attributes of the gold. In the second case, the storage site records the transfer of gold from one system user to the other. Then the system user informs the bank and/or storage site that he wishes to allocate some or all of his gold for use in the electronic cash system (column 6, lines 43-50)]**.

i.   *Referring to claim 10:*

   i.   Turk further teaches:

   (1)   wherein the means for encoding: a) divides the data item into a multiple of q K-tuples, denoted as $X_i = (x_{i1}, x_{i2} \ldots x_{iK})$, $I = 1$ to q, where x is a symbol over $GF(2^m)$ with m being a positive integer; b) for $i = I$ to q, encodes Xi into a codeword $Y_i = (y_{i1}, Y_{i2} \ldots y_{jN})$ using an (N, K) error-control code C, where Y_{ij}, is a symbol over $GF(2^m)$; c) rearranges Y_j, for $i = 1$ to q, into q-tuples Z, $(y_{1j} y_{2j} \ldots y_{qj})$, for $j = 1$ to N;

and d) stores the Z_j, for j = 1 to N, as said parts **[i.e., in one such method known as the RSA algorithm, encryption and decryption are accomplished by two mathematical equations which are related as inverses of each other. These equations are the private key, used by the issuing financial institution to digitally sign, or certify, a note, and the related public key, used by the recipient to determine and verify the existence of a valid signature on the note, whereby the above claimed limitation is considered to include in this RSA algorithm (column 5, lines 30-37)].**

      j.   *Referring to claim 12:*

          i.   Turk further teaches:

             (1)   wherein the means for decoding: a) on inputting a data item identity, for j = 1 to N, reads $Z'_j = (y'_{1j}\ y'_{2j}\ ...\ y'_{qj,,})$ from the locations where Z_j was stored, where Z_j, j = 1 to N, are the parts of the data item as identified; b) rearranges Z'_j, for j = 1 to N, into N-tuples $Y'_i = (y'_{i1},\ Y'_{i2}\ ...\ y'_{iN})$, for i = 1 to q; c) decodes $Y'i$ using an error- and -erasu re-co rrec ti on decoder of the (N, K) code C to obtain $X'j = (x'_{j1},\ X'_{i2}\ ...\ x'_{iK})$, for i = 1 to q; and d) concatenates X'_j, for i = 1 to q to form the data item **[i.e., in one such method known as the RSA algorithm, encryption and decryption are accomplished by two mathematical equations which are related as inverses of each other. These equations are the private key, used by the issuing financial institution to digitally sign, or certify, a note, and the related public key, used by the recipient to determine and verify the existence of a valid signature on the note, whereby the above claimed limitation is considered to include in this RSA algorithm (column 5, lines 30-37)].**

      k.   *Referring to claims 13, 15, and 16:*

          i.   These claims have limitations that is similar to those of claim 12, thus they are rejected with the same rationale applied against claim 12 above.

      l.   *Referring to claim 14:*

          i.   This claim has limitations that is similar to those of claim 11, thus it is rejected with the same rationale applied against claim 11 above.

      m.   *Referring to claim 17:*

        i.   Turk further teaches:

        (1)   means for encryption of the data item **[i.e., in the context of encrypted communications the public key is used to encrypt electronic data which can only be decrypted using the matched private key (column 5, lines 15-18)]**;

      n.   *Referring to claim 18:*

        i.   Turk further teaches:

        (1)   wherein the user is able to instruct encryption, prior to encoding, of the data item to be stored during the transaction session **[i.e., these equations are the private key, used by the issuing financial institution to digitally sign, or certify, a note, and the related public key, used by the recipient, that is "the user", to determine, that is "to instruct encryption", and verify the existence of a valid signature on the note (column 5, lines 33-37)]**.

      o.   *Referring to claim 19:*

        i.   Turk further teaches:

        (1)   wherein the information of each data item includes an indication of whether or not the item is encrypted and a pointer to a decryption key **[i.e., the "bank" is a organization which creates account relationships with its clients and maintains information received from the storage sites regarding gold (or other commodity) held there for storage and specifically identified for use in the system (column 6, lines 35-39). In addition, public key encryption methods have been developed for use in electronic cash. Furthermore, in the context of encrypted communications, the private key is used to decrypt electronic data encrypted with the corresponding public key (column 5, lines 21-30)]**.

      p.   *Referring to claim 20:*

        i.   This claim has limitations that is similar to those of claim 19, thus it is rejected with the same rationale applied against claim 19 above.

      q.   *Referring to claims 21 and 24:*

          i.   These claims have limitations that is similar to those of claim 18, thus they are rejected with the same rationale applied against claim 18 above.

    r.   *Referring to claims 22 and 23:*

      i.   Turk further teaches:

        (1)   wherein the means for checking decodes, checks and reencodes the data item at intervals; and wherein the intervals are of fixed or variable period. **[i.e., the RSA algorithm, that is "for checking decodes, checks and reencodes the data item at intervals" (column 5, line 31)].**

    s.   *Referring to claim 25:*

      i.   Turk further teaches:

        (1)   wherein the integrity check comprises a digital signature **[i.e., "Private key" is a mathematical key which is kept private to the owner and which is used to create digital signatures. In addition, A digital signature is an application of public key cryptography in that the key used to verify, that is "the integrity check", the signature is different from the key used to sign the signature (column 5, lines 19-29)].**

    t.   *Referring to claim 26:*

      i.   This claim has limitations that is similar to those of claim 5, thus it is rejected with the same rationale applied against claim 5 above.

    u.   *Referring to claim 27:*

      i.   Turk further teaches:

        (1)   wherein communication with the user during the transaction session is by means of a plurality of messages each associated with a transaction to be performed **[i.e., referring to Figure 1, "a plurality of messages each associated with a transaction to be performed" is considered to be sent to and from the storage site and the customers].**

    v.   *Referring to claims 28 and 29:*

    i. These claims have limitations that is similar to those of claim 27, thus they are rejected with the same rationale applied against claim 27 above.

  w. *Referring to claim 31:*

    i. This claim has limitations that is similar to those of claims 1 and 4, thus it is rejected with the same rationale applied against claims 1 and 4 above.

  x. *Referring to claim 32:*

    i. Turk further teaches:

    (1) receiving an instruction to retrieve a stored and encoded data item, decoding the data item and sending the data item to the user **[i.e., referring to Figure 1, the "bank" is a organization which creates account relationships with its clients and maintains information received from the storage sites regarding gold (or other commodity) held there for storage and specifically identified for use in the system (column 6, lines 35-39), wherein "receiving an instruction to retrieve a stored and encoded data item, decoding the data item and sending the data item to the user" is also considered to include in this "bank"].**

  4. Claims 33 and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Carroll (US 6,105, 131)

  a. *Referring to claim 33:*

    i. Carroll teaches:

    (1) a data depository having data storage means for storing digital data electronically **[i.e., referring to Figure 1, The secure server 12 includes a vault deposit server ("VDSI") 20 connected to a certification management system ("CMS") 24 and optionally a directory services 22 (column 4, lines 14-16)];**

    (2) providing for registration of users of the data depository, each user having an account with the depository **[i.e., referring to Figure 1, a registration authority terminal 16 can be connected to the computer network 14,**

that is for "providing for registration of users of the data depository", and each user can have a personal vault, that is "an account with the depository", as shown in Figure 2]; and

(3)   in response to a request from a user, opening a transaction session with the user in which the user and the depository authenticate each other and performing a transaction instructed by the user in respect of a digital data item, the transaction being selected by the user from a plurality of available transactions including storage of the item in or retrieval of the item from the depository [i.e., in Figure 4B, a new account request form illustrates a set of fields. The fields may include user specific information such as name, address, and telephone number, transaction information such as account type, fund transfer, and deposit method, and terminal information such as the storage location of the certificate. The session can be secured by using SSL communication. Secure session are indicated by an unbroken arrow in the lower left hand corner of the screen (column 7, lines 1-8)];

(4)   wherein storage of the item includes encoding the item into a plurality of parts and storing the encoded parts separately in the data storage means [i.e., a system including a secure server and processes enabling operating system integration through virtual logon and user data encrypted in "personal vaults" (column 1, lines 54-57). Furthermore, protection of data stored in a personal vault 40 includes encryption, digital signatures, and digital certificates (column 6, lines 6-7)].

     c.   _Referring to claim 35:_

       i.   Carroll further teaches:

       (1)   the step of checking, at intervals, the integrity of data items stored in the depository [i.e., referring to Figure 1, "the step of checking, at intervals, the integrity of data items stored in the depository" is considered to include in the secure server 12].

Response to Argument

5.   Applicant's arguments filed March 11, 2004 have been fully considered but they are not persuasive.

Applicant argues that:

"Turk fails to disclose or suggest means for encoding the data item into a plurality of part, the parts being separately stored in the storage means, and means for decoding the encoded data item, as recited by claim 1. For example, when digital data in Turk is transferred from a first customer to a second customer, Turk fails to disclose means for encoding the data item into a plurality of parts the parts being separately stored in the storage means. There is no suggestion in Turk that digital data is encoded into a plurality of parts being separately stored in a storage means, as recited by claim 1."

Examiner disagrees because Turk discloses:

Several kinds of cashless financial transaction systems, not based on gold or other valuable commodities, are also available. These include credit cards and debit cards which customers may use with a wide range of retailers. Each transaction of this type is accompanied by the provision of customer account details, that is "encoding item into plurality of parts", required for the actual transfer of funds between the specific customers and the specific retailers (column 3, lines 21-32). Furthermore, according to the instant specification on page 3, third paragraph, applicant mentioned the plurality of parts as N parts in which anything can be addressed as N parts; thus, Turk does include "encoding the data item into a plurality of parts". Therefore, the rejection of the claim stands.

Applicant argues that:

"Carroll fails to disclose or suggest encoding the item into a plurality of parts and storing the encoded parts separately in the data storage means, as recited by claim 33."

Examiner disagrees because Carroll discloses:

Protection of data stored in a personal vault 40 includes encryption, digital signatures and digital certificates, these are "encoding item into plurality of parts". According to the instant specification on page 3, third paragraph, applicant mentioned

the plurality of parts as N parts in which anything can be addressed as N parts; thus, Carroll does include "encoding the data item into a plurality of parts". Therefore, the rejection of the claim stands.

Conclusion

6.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

a.   Bouricius et al (US 4, 302, 810) discloses in Figure 5A, the whole TM format is clearly shown insofar as the data content is concerned. TM is a catenation of clear, singly encrypted, and doubly encrypted portions (column 6, lines 25-29).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanhnga (Tanya) Truong whose telephone number is 703-305-0327.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 703-305-4393. The fax and phone numbers for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

TC 2100 will be moved to Carlyle in October 2004, the new telephone number for TC 2100 receptionist is 571-272-2100. In October 2004, any inquiry concerning this communication should be directed to Thanhnga (Tanya) Truong whose new telephone number is 571-272-3858, and the examiner's supervisor, Kim Vu can be reached at 571-272-3859.

TBT

September 10, 2004

KIM VU

SUPERVISORY PATENT EXAMINER

TECHNOLOGY CENTER 2100